



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/814,572

03/31/2004

Albert H. Mitchell JR.

CIS0215US

6923

33031 7590 04/30/2008
CAMPBELL STEPHENSON LLP
11401 CENTURY OAKS TERRACE
BLDG. H, SUITE 250
AUSTIN, TX 78758

EXAMINER

MERED, HABTE

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/814,572	Applicant(s) MITCHELL ET AL.	
	Examiner HABTE MERED	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed on 1/30/2008 has been fully considered and entered.

Claims 1-55 are pending. Claims 1, 15, 25, 35, and 38 are the base independent claims. Claims 41-55 are new claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 46-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 46-50 individually contain the limitation reciting "selecting said second link only because said second link is associated with said virtual network.". However, Examiner fails to understand this limitation because the link has to be connected to the network irrespective of whether or not the network is virtually configured. Further based on the support cited by Applicant for these limitations, which is paragraph 29 of the specification, the limitation simply means only those downstream links associated with the virtual network are disabled. Hence "only" refers to the downstream links as opposed to the "upstream links". For the purpose of examining the claim the limitation in question will simply mean selecting downstream links associated with the virtual networks as the set of second links to be disabled which also agrees with the specification's paragraph 29.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claim 1-55** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakiso (US Pub. 2004/0105390) in view of Gai et al (US 6, 535, 491 B2).

Regarding **claim 1**, Sakiso'390 discloses a method comprising: detecting a failure of a first link (**Figure 1, Failure 2**), wherein the first link (**Figure 1, LSW7 – also referred to as critical up-link in paragraph 28**) is between a network element (**Figure 1, LAN-Switch SW7**) and an upstream portion of a communications network (**towards R1 and R2 is upstream direction where as towards Host1...9 is downstream --- See paragraph 27**); and in response to the detecting, maintaining a communications channel between the downstream portion of the communications network and the upstream portion of the communications network by disabling a second link (**Figure 1, LSW 1**) between the network element (**Figure 1, LAN-Switch SW7**) and a downstream portion of the communications network (**when the failure is detected the Host 1 switches the active L1₁ to the stand-by link L1₂ see paragraph 26. See also paragraph 28**).

Sakiso'390 fails to disclose a method of detecting a failure of a link wherein the first link is associated with a virtual network and also the second link is associated with the virtual network.

However, the above mentioned claimed limitations are well known in the art as evidenced by Gai'491. In particular, Gai'491 discloses a method of detecting a failure of a link **(Gai'491 shows in Column 5, 10-15 that a link failure is detected and as a result reconfigures the ports to bi-pass the failure situation. See also Figure 4)** wherein the first link **(Figure 1, elements 128)** is associated with a virtual network **(Gai'491 discloses that Figure 1 is a Virtual LAN in Column 15, Lines 48-65)** and also the second link **(Figure 1, links connecting servers and hosts to the LANs)** is associated with the virtual network.

In view of the above, having the method of Sakiso'390 and then given the well established teaching of Gai'491, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Sakiso'390 as taught by Gai'491, since Gai'491 clearly states in Column 15, Lines 48-50 that the benefit of using virtual networks is to provide network groupings and segregation based on functionalities.

Regarding **claim 25**, Sakiso'390 discloses a machine readable storage medium having a plurality of instructions executable by a machine embodied therein **(See Figures 2A and 2B showing implementation of the switch and host and in paragraphs 33 and 36 Sakiso'390 describes the medium the instruction is stored)**, wherein the plurality of instructions wherein executed cause the machine to perform a

Art Unit: 2616

method comprising: detecting a failure of a first link (**Figure 1, Failure 2**), wherein the first link (**Figure 1, LSW7 – also referred to as critical up-link in paragraph 28**) is between a network element (**Figure 1, LAN-Switch SW7**) and an upstream portion of a communications network (**towards R1 and R2 is upstream direction where as towards Host1...9 is downstream --- See paragraph 27**); and in response to the detecting, maintaining a communications channel between the downstream portion of the communications network and the upstream portion of the communications network by disabling a second link (**Figure 1, LSW 1**) between the network element (**Figure 1, LAN-Switch SW7**) and a downstream portion of the communications network (**when the failure is detected the Host 1 switches the active L1₁ to the stand-by link L1₂ see paragraph 26. See also paragraph 28**).

Sakiso'390 fails to disclose detecting a failure of a link wherein the first link is associated with a virtual network and also the second link is associated with the virtual network.

However, the above mentioned claimed limitations are well known in the art as evidenced by Gai'491. In particular, Gai'491 discloses detecting a failure of a link (**Gai'491 shows in Column 5, 10-15 that a link failure is detected and as a result reconfigures the ports to bi-pass the failure situation. See also Figure 4**) wherein the first link (**Figure 1, elements 128**) is associated with a virtual network (**Gai'491 discloses that Figure 1 is a Virtual LAN in Column 15, Lines 48-65**) and also the second link (**Figure 1, links connecting servers and hosts to the LANs**) is associated with the virtual network.

In view of the above, having the method stored in a machine-readable storage medium of Sakiso'390 and then given the well established teaching of Gai'491, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method stored in a machine-readable storage medium of Sakiso'390 as taught by Gai'491, since Gai'491 clearly states in Column 15, Lines 48-50 that the benefit of using virtual networks is to provide network groupings and segregation based on functionalities.

Regarding **claim 15**, Saksio discloses an apparatus (See Figure 1) comprising: means for detecting a failure of a first link (**Figure 1, Failure 2**), wherein the first link (**Figure 1, LSW7 – also referred to as critical up-link in paragraph 28**) is between a network element (**Figure 1, LAN-Switch SW7**) and an upstream portion of a communications network (**towards R1 and R2 is upstream direction where as towards Host1...9 is downstream --- See paragraph 27**); and means for maintaining a communications channel between the downstream portion of the communications network and the upstream portion of the communications network by disabling a second link (**Figure 1, LSW 1**) between the network element (**Figure 1, LAN-Switch SW7**) and a downstream portion of the communications network (**when the failure is detected the Host 1 switches the active L1₁ to the stand-by link L1₂ see paragraph 26. See also paragraph 28**).

Sakiso'390 fails to disclose an apparatus for detecting a failure of a link wherein the first link is associated with a virtual network and also the second link is associated with the virtual network.

However, the above mentioned claimed limitations are well known in the art as evidenced by Gai'491. In particular, Gai'491 discloses an apparatus for detecting a failure of a link (**Gai'491 shows in Column 5, 10-15 that a link failure is detected and as a result reconfigures the ports to bi-pass the failure situation. See also Figure 4**) wherein the first link (**Figure 1, elements 128**) is associated with a virtual network (**Gai'491 discloses that Figure 1 is a Virtual LAN in Column 15, Lines 48-65**) and also the second link (**Figure 1, links connecting servers and hosts to the LANs**) is associated with the virtual network.

In view of the above, having the apparatus of Sakiso'390 and then given the well established teaching of Gai'491, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the apparatus of Sakiso'390 as taught by Gai'491, since Gai'491 clearly states in Column 15, Lines 48-50 that the benefit of using virtual networks is to provide network groupings and segregation based on functionalities.

Regarding **claim 2**, Sakiso'390 discloses a method wherein the downstream portion of the communications network comprises a redundantly linked network element. (**See Figure 1, Hosts 1...9 is multi-homed with active and stand-by links**)

Regarding **claim 16**, it is noted that the limitations of claim 16 corresponds to that of claim 2 as discussed above, please see the Examiner's comments with respect to claim 2 as set forth in the rejection above.

Regarding **claim 26**, it is noted that the limitations of claim 26 corresponds to that of claim 2 as discussed above, please see the Examiner's comments with respect to claim 2 as set forth in the rejection above.

Regarding **claim 3**, Sakiso'390 discloses a method wherein the redundantly-linked network element comprises a protocol stack including a first protocol stack layer and a second protocol stack layer, the first protocol stack layer is associated with one or more applications, and the disabling comprises notifying the second protocol stack layer of the failure. **(See Figures 2a and 2b - the protocol stacks involved are the MAC and PHY layers)**

Regarding **claim 17**, it is noted that the limitations of claim 17 corresponds to that of claim 3 as discussed above, please see the Examiner's comments with respect to claim 3 as set forth in the rejection above.

Regarding **claim 27**, it is noted that the limitations of claim 27 corresponds to that of claim 3 as discussed above, please see the Examiner's comments with respect to claim 3 as set forth in the rejection above.

Regarding **claim 4**, Sakiso'390 discloses a method wherein the network element comprises a primary network element (**Figure 1, LAN-SW1**), the method further comprises enabling a third link between the redundantly-linked network element (**Figure 1, Host 1**) and a secondary network element (**Figure 1, LAN-SW2**), and the secondary network element is coupled to the upstream portion of the communications network using a fourth link (**Figure 1, LSW2**). **(See also paragraphs 26-29)**

Regarding **claim 18**, it is noted that the limitations of claim 18 corresponds to that of claim 4 as discussed above, please see the Examiner's comments with respect to claim 4 as set forth in the rejection above.

Regarding **claim 28**, it is noted that the limitations of claim 28 corresponds to that of claim 4 as discussed above, please see the Examiner's comments with respect to claim 4 as set forth in the rejection above.

Regarding **claim 5**, Sakiso'390 discloses a method wherein the redundantly linked network element comprises a multi-homed end station (**See Figure 1, all Hosts are indeed multi-homed end station**).

Regarding **claim 19**, it is noted that the limitations of claim 19 corresponds to that of claim 5 as discussed above, please see the Examiner's comments with respect to claim 5 as set forth in the rejection above.

Regarding **claim 29**, it is noted that the limitations of claim 29 corresponds to that of claim 5 as discussed above, please see the Examiner's comments with respect to claim 5 as set forth in the rejection above.

Regarding **claim 6**, Sakiso'390 discloses a method wherein the network element comprises a data link layer network element. (**See Paragraphs 6 and 18**)

Regarding **claim 7**, Sakiso'390 discloses a method wherein the data link layer network element comprises an Ethernet switch. (**See Figures 1 and 2a – the LAN Switch is an Ethernet switch**)

Regarding **claim 8**, Sakiso'390 discloses a method wherein the upstream portion of the communications network comprises a network layer network element. **(Figure 1 – R1 and R2 are routers and are network layer network elements)**

Regarding **claim 9**, Sakiso'390 discloses a method wherein the disabling comprises: disabling a plurality of links between the network element and a plurality of redundantly-linked network elements. **(Due to Failure 2 links LSW1, LSW3 and LSW4 are disabled – see paragraph 28)**

Regarding **claim 10**, Sakiso'390 discloses a method wherein the disabling comprises: disabling a link of a plurality of links between the network element and a plurality of redundantly-linked network elements. **(Due to Failure 2 links LSW1, LSW3 and LSW4 are disabled – see paragraph 28)**

Regarding **claim 20**, it is noted that the limitations of claim 20 corresponds to that of claim 10 as discussed above, please see the Examiner's comments with respect to claim 10 as set forth in the rejection above.

Regarding **claim 30**, it is noted that the limitations of claim 30 corresponds to that of claim 10 as discussed above, please see the Examiner's comments with respect to claim 10 as set forth in the rejection above.

Regarding **claim 11**, Sakiso'390 discloses a method wherein the disabling the link of the plurality of links comprises: disabling a link associated with a virtual network. **(Even though it is not clear what the Applicant is referring to as a virtual network, the routers R1 and R2 can be connected to an ATM network forming a switched or permanent virtual connection)**

Regarding **claim 21**, it is noted that the limitations of claim 21 corresponds to that of claim 11 as discussed above, please see the Examiner's comments with respect to claim 11 as set forth in the rejection above.

Regarding **claim 31**, it is noted that the limitations of claim 31 corresponds to that of claim 11 as discussed above, please see the Examiner's comments with respect to claim 11 as set forth in the rejection above.

Regarding **claim 12**, Sakiso'390 discloses a method wherein the disabling the link of the plurality of links comprises: disabling a link associated with a port of the network element. **(See Figure 2a&b – the ports are associated with the links)**

Regarding **claim 22**, it is noted that the limitations of claim 22 corresponds to that of claim 12 as discussed above, please see the Examiner's comments with respect to claim 12 as set forth in the rejection above.

Regarding **claim 32**, it is noted that the limitations of claim 32 corresponds to that of claim 12 as discussed above, please see the Examiner's comments with respect to claim 12 as set forth in the rejection above.

Regarding **claim 13**, Sakiso'390 discloses a method wherein the disabling comprises: disabling the second link between the network element and the downstream portion of the communications network within a period of time substantially less than or equal to 50 milliseconds of the detecting. **(See Paragraphs 14 and 16)**

Regarding **claim 23**, it is noted that the limitations of claim 23 corresponds to that of claim 13 as discussed above, please see the Examiner's comments with respect to claim 13 as set forth in the rejection above.

Regarding **claim 33**, it is noted that the limitations of claim 33 corresponds to that of claim 13 as discussed above, please see the Examiner's comments with respect to claim 13 as set forth in the rejection above.

Regarding **claim 14**, Sakiso'390 discloses a method wherein the disabling comprises: disabling the second link between said network element and said downstream portion of the communications network within a period of time substantially less than or equal to 2 seconds of the detecting. **(See Paragraphs 14 and 16 and given that Sakiso'390 teaches the same method the same performance has to be produced)**

Regarding **claim 24**, it is noted that the limitations of claim 24 corresponds to that of claim 14 as discussed above, please see the Examiner's comments with respect to claim 14 as set forth in the rejection above.

Regarding **claim 34**, it is noted that the limitations of claim 34 corresponds to that of claim 14 as discussed above, please see the Examiner's comments with respect to claim 14 as set forth in the rejection above.

Regarding **claim 41**, the combination of Sakiso'390 and Gai'491 discloses a method wherein the second link is a downstream link that is individually predetermined by a configuration interface. **(Sakiso'390 already teaches the second link is a downstream link. Similarly Gai'491 in Figure 1 shows that the secondary downstream link 128 connected to port 3 of switch 114 is disabled and consequently one of the back-up ports 2 or 4 will be activated as detailed in Gai'491's Column 11, Lines 30-46. The configuration interface of the access**

switch 114 of Figure 1 is shown in Figure 2 collectively as Rapid Reconfiguration Entity 234. The Rapid Reconfiguration Entity 234 of Figure 2 chooses the pre-selected backup port and the link associated with the port to be active upon detection of the failure of port in the forward state. Gai'491 teaches at the minimum the ability to select a link to disable and/or enable using the Rapid Reconfiguration Entity as detailed in Column 12, Lines 8-27 and shown in detail in Figure 3D.)

Regarding **claim 42**, it is noted that the limitations of claim 42 corresponds to that of claim 41 as discussed above, please see the Examiner's comments with respect to claim 41 as set forth in the rejection above.

Regarding **claim 43**, it is noted that the limitations of claim 43 corresponds to that of claim 41 as discussed above, please see the Examiner's comments with respect to claim 41 as set forth in the rejection above.

Regarding **claim 46**, the combination of Sakiso'390 and Gai'491 discloses a method further comprising; selecting a second link only because the second link is associated with the virtual network (**Sakiso'390 teaches selecting a second link (LSW1 in Figure 1) and the link is connected to the network shown in Figure 1. Gai'491 discloses 1st and 2nd links associated with the VLAN in Figure 1 as disclosed in Column 15, Lines 48-55).**

Regarding **claim 47**, it is noted that the limitations of claim 47 corresponds to that of claim 46 as discussed above, please see the Examiner's comments with respect to claim 46 as set forth in the rejection above.

Regarding **claim 48**, it is noted that the limitations of claim 48 corresponds to that of claim 46 as discussed above, please see the Examiner's comments with respect to claim 46 as set forth in the rejection above.

Regarding **claim 51**, the combination of Sakiso'390 and Gai'491 discloses a method wherein the disabling the second link on-demand (**Gai'491 shows in Column 8, Lines 48-52 that the Administrator can enter on-demand commands in the switches to select links and configure switches with blocked and forwarding ports in response to various conditions including analyzing system messages like the BPDUs as detailed in Column 11, Lines 48-60**) in response to analyzing a plurality of system attributes.

Regarding **claim 52**, it is noted that the limitations of claim 52 corresponds to that of claim 51 as discussed above, please see the Examiner's comments with respect to claim 51 as set forth in the rejection above.

Regarding **claim 53**, it is noted that the limitations of claim 53 corresponds to that of claim 51 as discussed above, please see the Examiner's comments with respect to claim 51 as set forth in the rejection above.

Regarding **claims 35**, Saksio discloses a data processing system comprising: a redundantly-linked endstation (**See Hosts 1...9 which is multi-homed**); and a network element (**Figure 1, LSW7**) configured to detect a failure of a first link, wherein the first link is (**Figure 1, LSW7**) between the network element and an upstream portion of a communications network (**towards R1 and R2 is upstream direction where as towards Host1...9 is downstream --- See paragraph 27**), and in response to the

Art Unit: 2616

failure, maintain a communications channel between the redundantly-linked endstation and the upstream portion of the communications network (**Figure 1, LAN-Switch SW7**) and a downstream portion of the communications network (**when the failure is detected the Host 1 switches the active L1₁ to the stand-by link L1₂ see paragraph 26. See also paragraph 28**) by disabling a second link (**Figure 1, LSW1**) between the network element and the redundantly-linked endstation to maintain a communications channel between the redundantly-linked endstation and the upstream portion of the communications network in response to the failure (**See Paragraphs 26, 27, and 28**).

Sakiso'390 fails to disclose a system of detecting a failure of a link wherein the first link is associated with a virtual network and also the second link is associated with the virtual network.

However, the above mentioned claimed limitations are well known in the art as evidenced by Gai'491. In particular, Gai'491 discloses a method of detecting a failure of a link (**Gai'491 shows in Column 5, 10-15 that a link failure is detected and as a result reconfigures the ports to bi-pass the failure situation. See also Figure 4**) wherein the first link (**Figure 1, elements 128**) is associated with a virtual network (**Gai'491 discloses that Figure 1 is a Virtual LAN in Column 15, Lines 48-65**) and also the second link (**Figure 1, links connecting servers and hosts to the LANs**) is associated with the virtual network.

In view of the above, having the system of Sakiso'390 and then given the well established teaching of Gai'491, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Sakiso'390 as

Art Unit: 2616

taught by Gai'491, since Gai'491 clearly states in Column 15, Lines 48-50 that the benefit of using virtual networks is to provide network groupings and segregation based on functionalities.

Regarding **claims 36**, Saksio discloses a data processing system wherein the network element comprises a primary network element (**Figure 1, LAN-SW1**), the redundantly-linked endstation (**Host 1**) is configured to enable a third link (**Figure 1, L₁₂**) between the redundantly-linked endstation and a secondary network element (**Figure 1, LAN-SW2**), and the secondary network element is coupled to the upstream portion of the communications network using a fourth link (**Figure 1, LAN-SW2**).

Regarding **claims 37**, Saksio discloses a data processing system wherein the network element comprises an Ethernet switch. (**See Figure 2a and all the LAN switches in Figure 1 are Ethernet switches**)

Regarding **claim 38**, Saksio discloses a data processing system comprising: a redundantly-linked endstation (**See Hosts 1...9 which is multi-homed**); a primary network element (**Figure 1, LAN-SW1**), wherein the primary network element is coupled to an upstream portion of a communications network using a first link (**Figure 1, LSW1**), the primary network element is coupled to the redundantly-linked endstation using a second link (**Figure 1, L₁₁**) and the primary network element is configured to detect a failure of the first link (**Figure 1, Failure 1**), and disable the second link to maintain a communications channel between the redundantly-linked endstation and the upstream portion of the communications network in response to the failure (**See paragraphs 26 and 27**); and a secondary network element (**Figure**

1, LAN-SW2), wherein the secondary network element is coupled to the redundantly-linked endstation using a third link **(Figure 1, L₁₂)**. **(See Paragraphs 26, 27, and 28)**

Sakiso'390 fails to disclose a system of detecting a failure of a link wherein the first link is associated with a virtual network and also the second link is associated with the virtual network.

However, the above mentioned claimed limitations are well known in the art as evidenced by Gai'491. In particular, Gai'491 discloses a method of detecting a failure of a link **(Gai'491 shows in Column 5, 10-15 that a link failure is detected and as a result reconfigures the ports to bi-pass the failure situation. See also Figure 4)** wherein the first link **(Figure 1, elements 128)** is associated with a virtual network **(Gai'491 discloses that Figure 1 is a Virtual LAN in Column 15, Lines 48-65)** and also the second link **(Figure 1, links connecting servers and hosts to the LANs)** is associated with the virtual network.

In view of the above, having the system of Sakiso'390 and then given the well established teaching of Gai'491, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Sakiso'390 as taught by Gai'491, since Gai'491 clearly states in Column 15, Lines 48-50 that the benefit of using virtual networks is to provide network groupings and segregation based on functionalities.

Regarding **claim 39**, Saksio discloses a data processing system, wherein the redundantly-linked endstation **(Figure 1, Host 1)** is configured to enable the third link **(Figure 1, L₁₂)**, and the secondary network element **(Figure 1, LAN-SW2)** is

coupled to the upstream portion of the communication network using a fourth link

(Figure 1, LSW2)

Regarding **claims 40**, Saksio discloses a data processing system wherein the primary network element comprises an Ethernet switch. **(See Figure 2a and all the LAN switches in Figure 1 are Ethernet switches)**

Regarding **claim 44**, it is noted that the limitations of claim 44 corresponds to that of claim 41 as discussed above, please see the Examiner's comments with respect to claim 41 as set forth in the rejection above.

Regarding **claim 45**, it is noted that the limitations of claim 45 corresponds to that of claim 41 as discussed above, please see the Examiner's comments with respect to claim 41 as set forth in the rejection above.

Regarding **claim 49**, it is noted that the limitations of claim 49 corresponds to that of claim 46 as discussed above, please see the Examiner's comments with respect to claim 46 as set forth in the rejection above.

Regarding **claim 50**, it is noted that the limitations of claim 50 corresponds to that of claim 46 as discussed above, please see the Examiner's comments with respect to claim 46 as set forth in the rejection above.

Regarding **claim 54**, it is noted that the limitations of claim 54 corresponds to that of claim 51 as discussed above, please see the Examiner's comments with respect to claim 51 as set forth in the rejection above.

Regarding **claim 55**, it is noted that the limitations of claim 55 corresponds to that of claim 51 as discussed above, please see the Examiner's comments with respect to claim 51 as set forth in the rejection above.

Response to Arguments

Applicant's arguments with respect to all independent amended claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2616

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HABTE MERED whose telephone number is (571)272-6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung S. Moe can be reached on 571 272 7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit 2616

/Habte Mered/
Examiner, Art Unit 2616
4-25-08